

CURRENT LISTING OF CLAIMS

Claims 1-14 (cancelled).

15. (Previously presented) An isolated theta defensin having the amino acid sequence:

Gly-Phe-Cys-Arg-Cys-Ile-Cys-Thr-Arg-Gly-Phe-Cys-Arg-Cys-Ile-Cys-Thr-Arg (SEQ ID NO:32).

16. (Previously presented) The isolated theta defensin of claim 15, wherein the Gly at position 1 is linked through a peptide bond to the Arg at position 18.

17. (Previously presented) The isolated theta defensin of claim 16, wherein an intrachain crosslink is formed between two amino acids selected from the group consisting of:

Cys at position 3 and Cys at position 16;

Cys at position 5 and Cys at position 14; and

Cys at position 7 and Cys at position 12.

18. (Previously presented) The isolated theta defensin of claim 17, wherein a disulfide bond is formed between:

Cys at position 3 and Cys at position 16;

Cys at position 5 and Cys at position 14; and

Cys at position 7 and Cys at position 12.

19. (Previously presented) An isolated theta defensin having the amino acid sequence:

Gly-Val-Cys-Arg-Cys-Leu-Cys-Arg-Arg-Gly-Val-Cys-Arg-Cys-Leu-Cys-Arg-Arg (SEQ ID NO:33).

20. (Previously presented) The isolated theta defensin of claim 19, wherein the Gly at position 1 is linked through a peptide bond to the Arg at position 18.

21. (Previously presented) The isolated theta defensin of claim 20, wherein an intrachain crosslink is formed between two amino acids selected from the group consisting of:

Cys at position 3 and Cys at position 16;

Cys at position 5 and Cys at position 14; and

Cys at position 7 and Cys at position 12.

22. (Previously presented) The isolated theta defensin of claim 21, wherein a disulfide bond is formed between:

Cys at position 3 and Cys at position 16;

Cys at position 5 and Cys at position 14; and

Cys at position 7 and Cys at position 12.

Claims 23-32 (Cancelled).

33. (Previously entered) A pharmaceutical composition, comprising the theta defensin of claim 15 and a pharmaceutically acceptable carrier.

34. (Original) The pharmaceutical composition of claim 33, which is associated with a liposome.

35. (Original) The pharmaceutical composition of claim 33, which is associated with a non-liposome lipid complex.

Claims 36-50 (cancelled).

51. (Previously presented) A method of reducing or inhibiting growth or survival of a microorganism in an environment capable of sustaining the growth or survival of the microorganism, comprising administering an effective amount of the theta defensin of claim 15 to said environment, thereby reducing or inhibiting the growth or survival of the microorganism.

52. (Original) The method of claim 51, which has antimicrobial activity against a microorganism selected from the group consisting of a gram positive bacterium, a gram negative bacterium, a yeast and a fungus.

53. (Original) The method of claim 52, wherein said microorganism is selected from the group consisting of *Staphylococcus* sp., *Listeria* sp., *Escherichia* sp., *Salmonella* sp., *Candida* sp., and *Cryptococcus* sp.

54. (Original) The method of claim 53, wherein said microorganism is selected from the group consisting of *Staphylococcus aureus*, *Listeria monocytogenes*, *Escherichia coli*, *Salmonella typhimurium*, *Candida albicans*, and *Cryptococcus neoformans*.

55. (Withdrawn) The method of claim 51, which has antimicrobial activity against a protozoan.

56. (Withdrawn) The method of claim 55, wherein said protozoan is selected from the group consisting of *Giardia* sp. and *Acanthamoeba* sp.

57. (Withdrawn) The method of claim 51, which has antimicrobial activity against a virus.

58. (Withdrawn) The method of claim 57, wherein said virus is human immunodeficiency virus-1.

59. (Withdrawn) The method of claim 51, wherein said environment is a food or food product.

60. (Withdrawn) The method of claim 51, wherein said environment is a solution.

61. (Withdrawn) The method of claim 60, wherein said solution is a contact lens solution.

62. (Withdrawn) The method of claim 60, wherein said solution is an eye wash solution.

63. (Withdrawn) The method of claim 51, wherein said environment is an inanimate object comprising a surface.

64. (Withdrawn) The method of claim 51, wherein said environment is a mammal.

65. (Withdrawn) The method of claim 51, wherein said administration is topical.

66. (Withdrawn) The method of claim 51, wherein said administration is by injection.

67. (Withdrawn) The method of claim 51, wherein said administration is oral.

Claims 68-83 (cancelled).

84. (Previously presented) A pharmaceutical composition, comprising the theta defensin of claim 19 and a pharmaceutically acceptable carrier.

85. (Previously presented) The pharmaceutical composition of claim 84, which is associated with a liposome.

86. (Previously presented) The pharmaceutical composition of claim 84, which is associated with a non-liposome lipid complex.

87. (Previously presented) A method of reducing or inhibiting growth or survival of a microorganism in an environment capable of sustaining the growth or survival of the microorganism, comprising administering an effective amount of the theta defensin of claim 19 to said environment, thereby reducing or inhibiting the growth or survival of the microorganism.

88. (Previously presented) The method of claim 87, which has antimicrobial activity against a microorganism selected from the group consisting of a gram positive bacterium, a gram negative bacterium, a yeast and a fungus.

89. (Previously presented) The method of claim 88, wherein said microorganism is selected from the group consisting of *Staphylococcus* sp., *Listeria* sp., *Escherichia* sp., *Salmonella* sp., *Candida* sp., and *Cryptococcus* sp.

90. (Previously presented) The method of claim 89, wherein said microorganism is selected from the group consisting of *Staphylococcus aureus*, *Listeria monocytogenes*, *Escherichia coli*, *Salmonella typhimurium*, *Candida albicans*, and *Cryptococcus neoformans*.

91. (Withdrawn) The method of claim 87, which has antimicrobial activity against a protozoan.

92. (Withdrawn) The method of claim 91, wherein said protozoan is selected from the group consisting of *Giardia* sp. and *Acanthamoeba* sp.

93. (Withdrawn) The method of claim 87, which has antimicrobial activity against a virus.

94. (Withdrawn) The method of claim 93, wherein said virus is human immunodeficiency virus-1.

95. (Withdrawn) The method of claim 87, wherein said environment is a food or food product.

96. (Withdrawn) The method of claim 87, wherein said environment is a solution.

97. (Withdrawn) The method of claim 96, wherein said solution is a contact lens solution.

98. (Withdrawn) The method of claim 96, wherein said solution is an eye wash solution.

99. (Withdrawn) The method of claim 87, wherein said environment is an inanimate object comprising a surface.

100. (Withdrawn) The method of claim 87, wherein said environment is a mammal.

101. (Withdrawn) The method of claim 87, wherein said administration is topical.

102. (Withdrawn) The method of claim 87, wherein said administration is by injection.

103. (Withdrawn) The method of claim 87, wherein said administration is oral.

Claims 104 and 105 (Canceled)

106. (Previously presented) A method of expressing a theta defensin, comprising

- (a) administering a vector to a cell, wherein said vector comprises an expression element operationally linked to a nucleotide sequence encoding the theta defensin peptide of claim 15; and
- (b) expressing said encoded theta defensin peptides, wherein said peptides form a theta defensin.

Claims 107 and 108 (Canceled)

109. (Previously presented) A method of expressing a theta defensin, comprising

- (a) administering a vector to a cell, wherein said vector comprises an expression element operationally linked to a nucleotide sequence encoding the theta defensin peptide of claim 19; and
- (b) expressing said encoded theta defensin peptides, wherein said peptides form a theta defensin.